

February 3, 2011

VIA FEDERAL EXPRESS

The Honorable Lisa P. Jackson
Office of the Administrator
Ariel Rios Building
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Re: Petition for Rulemaking

Dear Administrator Jackson:

On behalf of Carrier Corporation ("Carrier"), pursuant to the Administrative Procedure Act and the Clean Air Act, attached please find a petition to amend 40 C.F.R. part 82, subpart I and the Environmental Protection Agency's ("EPA's") related guidance interpreting this subpart. In particular, Carrier respectfully requests that EPA amend subpart I by prohibiting the marketing and sale not only of certain appliances pre-charged with hydrochlorofluorocarbon-22 ("HCFC-22"), but also uncharged residential sub-systems of such appliances (*e.g.*, residential condensing units). *See Protection of Stratospheric Ozone: Ban on the Sale or Distribution of Pre-Charged Appliances*, 74 Fed. Reg. 66,465 (Dec. 15, 2009).

Granting the attached petition would support EPA's obligations under the Clean Air Act ("CAA") and the Montreal Protocol by: (1) decreasing demand for HCFC-22 consistent with EPA's step-down allocations and policy imperatives under the Montreal Protocol, Decision XIX/6 of the Parties to the Montreal Protocol and Title VI of the Clean Air Act; (2) lessening stratospheric ozone depletion by eliminating unnecessary emissions of HCFC-22 into the atmosphere; (3) securing a corresponding benefit to the global environment through the reduction of greenhouse gas emissions; and (4) assisting consumers in transitioning to more efficient and environmentally-friendly technology.

Given the importance of these benefits, Carrier respectfully requests that EPA respond to this petition as soon as practicable. We would welcome a meeting to discuss this petition with you further.

Sincerely,



Chet Thompson
Crowell & Moring LLP
On behalf of
Carrier Corporation

cc: Honorable Gina McCarthy
(via Federal Express)

**BEFORE THE ADMINISTRATOR OF THE UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY**

Carrier Corporation,

Petitioner,

v.

Honorable Lisa P Jackson,
In her official capacity as Administrator,
United States Environmental Protection Agency,

Respondent.

DOCKET NO. _____

**Petition for Rulemaking to Amend 40
C.F.R. part 82 subpart I**

Filed: February 3, 2011

Pursuant to section 553(e) of the Administrative Procedure Act and Title VI of the Clean Air Act,¹ and based on industry-wide developments since January 1, 2010, Carrier Corporation (“Carrier”) hereby petitions the United States Environmental Protection Agency (“EPA”) to convene a proceeding to amend its final rule regarding the sale and distribution of appliances and component parts charged with hydrochlorofluorocarbon-22 (“HCFC-22”) (the “Appliance Rule”).² *Protection of Stratospheric Ozone: Ban on the Sale or Distribution of Pre-Charged Appliances*, 74 Fed. Reg. 66,465 (Dec. 15, 2009) (to be codified at 40 C.F.R. pt. 82). Carrier requests that EPA amend its regulations to ban the sale and distribution not only of post-2009 residential pre-charged HCFC-22 appliances and components but also uncharged residential appliance “sub-systems” (e.g., residential condensing units).

¹ 42 U.S.C. § 7401, *et seq.*

² Alternatively, Carrier requests that EPA initiate a proceeding to reconsider the Appliance Rule pursuant to 42 U.S.C. § 7607(d). Carrier notes that EPA has initiated reconsideration of final rules more than 30 days after finalizing a rule. For example, EPA acted on its own initiative to reconsider the 2008 final national ambient air quality standard for ozone more than 18 months after its promulgation. 75 Fed. Reg. 2,938

Modifying EPA's Appliance Rule as requested herein would help EPA fulfill its obligations to protect the stratospheric ozone under the Montreal Protocol and the Clean Air Act ("CAA") by: (1) decreasing demand for HCFC-22 in line with EPA's step-down allocations under the Montreal Protocol, Decision XIX/6 of the Parties to the Montreal Protocol, and the CAA; (2) eliminating unnecessary emissions of HCFC-22 that will occur if the useful lives of residential split-system air conditioners are allowed to be extended beyond their original design through the replacement of unit sub-systems; (3) obtaining meaningful reductions in GHG emissions; and (4) assisting consumers with the transition to more energy-efficient technology.

EPA could obtain these benefits by amending the regulatory language at 40 C.F.R. part 82, subpart I, to prohibit not only the sale and distribution of residential pre-charged HCFC-22 appliances and appliance components, but also the sale and distribution of both charged and uncharged residential "sub-systems" (*e.g.*, residential condensing units). A straightforward way to accomplish this goal would be to (1) broaden the existing list of prohibited products set forth at §82.306 to include residential "appliance sub-systems" manufactured on or after January 1, 2012; and (2) add the following definition of residential "appliance sub-systems" to § 82.302: "any portion of the residential refrigerant circuitry consisting of the following component parts: a compressor, motor, fan, and condenser or heat exchanger coil for systems with capacities of less than 65,000 Btu/hour."

Banning the sale of residential HCFC-22 appliance sub-systems manufactured after January 1, 2012 would be more in harmony with the purpose of the Montreal Protocol and Title VI of the CAA to transition products and uses of high ozone-depleting substances to lesser and/or zero ozone-depleting substances. Unfortunately, the Appliance Rule, as currently constructed, incentivizes the continued use of HCFC-22 residential split-systems beyond their

intended useful lives. If entire residential HCFC-22 sub-systems (*e.g.*, residential condensing units) on existing residential appliances are replaced, the appliances can operate far beyond the time that such appliances would normally be retired and replaced by the next generation of air conditioners. Extending the normal lives of the existing HCFC-22 air conditioning fleet will result over time in greater emissions of HCFC-22 and GHGs to the atmosphere.

Carrier's proposed regulatory amendment would eliminate the potential for this increased reliance on residential HCFC-22 systems, thereby avoiding increased leakage of HCFC-22 into the atmosphere either by continued operation of the HCFC-based systems or increased servicing of such equipment over extended timeframes. The proposed amendment would therefore support EPA's goals for implementing the Montreal Protocol and Title VI of the CAA: to reduce the emission of ozone-depleting substances and to assist in the decades-long recovery of the stratospheric ozone layer. Specifically, the amendment would further the goals EPA specifically identified in the preamble to the Appliance Rule: to "[R]estrict applications of ozone-depleting substances where suitable substitutes exist," to reduce the potential atmospheric effects "via leaks or improper servicing," and to pursue "a more aggressive HCFC production and consumption phase-out." 74 Fed. Reg. at 66,454. The amendment would also support the intent of Decision XIX/6, championed by the United States and adopted by the 19th Meeting of the Parties to the Montreal Protocol in September 2007 — to accelerate the planned phase-out of the production and consumption of HCFCs and promote the development of substitutes and alternatives that have a lesser impact on the climate.³

³ For example, Decision XIX/6, 11(b) gives priority to funding projects in Article 5 countries that focus on "substitutes and alternatives that minimize other impacts on the environment, including on the climate, taking into account global warming potential, energy use and other relevant factors."

I. BACKGROUND

On December 15, 2009, EPA published the Appliance Rule banning the sale and distribution of any pre-charged appliance or appliance component manufactured after January 1, 2010 containing HCFC-22, HCFC-142b, or any blend of these substances. 74 Fed. Reg. 66,467. According to the Rule, prohibiting *pre-charged* air conditioning units and their component parts is warranted since they “may reasonably be anticipated to affect ozone in the stratosphere, and such effect may reasonably be anticipated to endanger public health.” *Id.* at 66,454. EPA further stated that “adding new HCFC-22 appliances to the installed base would cause the servicing demand to grow, potentially resulting in increases in the amounts of HCFC-22 needed to service existing appliances, and likely hinder the growth of alternative refrigerants that do not directly contribute to the depletion of the ozone layer.”⁴ *Id.* at 66,459.

Despite the goals that underpin EPA’s legal and policy rationale for this rulemaking — to reduce the use of HCFC-22 and assist consumers in the transition to alternative refrigerants — the Appliance Rule exempts the sale of *uncharged* HCFC-22 “appliance components” from its list of prohibited products set forth at 40 C.F.R. § 82.304. *Id.* at 66,459-60. EPA clarifies in the final rule that it “is not banning the sale and distribution of un-charged components needed to service existing appliances manufactured prior to January 1, 2010.” *Id.* at 66,459. *Id.* Instead, EPA indicates that such components “can be installed into existing appliances and charged on-site with reclaimed or virgin HCFC-22 or HCFC-142.”⁵ *Id.*

⁴ As discussed below, Carrier agrees with this proposition, but also believes that allowing the sale and distribution of appliance sub-systems to replace sub-systems that have come to the end of their useful lives will result in the same outcome.

⁵ It should be noted that although EPA had not previously promulgated a definition of an appliance component, the Appliance Rule states that EPA “considers a ‘part’ to be ‘any component or set of components that makes up less than an appliance.’” *Id.* at 66,456 (emphasis added). And, according to EPA, examples of a “component” include

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EPA's rationale for allowing this continued use of HCFC-22 appears to be a concern for the servicing of "existing appliances manufactured prior to January 1, 2010." *Id.* Carrier supports EPA's purported goal of allowing consumers to continue to service their existing equipment after January 1, 2010, but EPA's final rule goes too far. The rule allows consumers to do more than repair and maintain their existing HCFC-22 units; it allows them to essentially reconstruct a previously manufactured HCFC-22 system into a new HCFC-22 unit (something disallowed under the CAA's New Source Rule and New Source Performance Standards). Thus, the Appliance Rule draws an unclear and unpersuasive distinction between activities that would constitute the servicing of existing systems and activities that constitute the manufacture of new systems in the field. While EPA's Appliance Rule bans new pre-charged appliances and appliance components "that would be used to configure new appliances in the field," *id.* at 66,457, the rule effectively allows such an action to occur by permitting appliance sub-systems to be installed in existing equipment. This is because appliance sub-systems are integral to the operation of split-system appliances, are designed to last for the life of the system and represent a large capital investment relative to the appliance as a whole. In fact, EPA has acknowledged that certain "major appliance component[s]," such as condensing units, constitute "portions of the refrigerant circuitry *without which the appliance would not be able to function in its intended purpose.*" *Id.* at 66,456 (emphasis added). Yet the Appliance Rule allows the manufacture and sale of these components (if uncharged) even though they can effectively be used to rebuild rather than service previously-manufactured equipment.

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"line sets, evaporators, or condensers that are not sold as part of a set from which one can construct a complete split system [air conditioner] or other appliance." *Id.*

This result is counter to the goals EPA expressed for allowing continued servicing of HCFC-22 equipment. EPA stated that “it is necessary to continue to permit the servicing of air-conditioning and refrigeration appliances manufactured prior to January 1, 2010, to ensure a smooth transition to alternatives EPA intends to allow the continued servicing of these appliances in order to allow for a smooth transition *away from HCFC-22 and HCFC-142b*.” 74 Fed. Reg. at 66,458 (emphasis added). Under the Appliance Rule, however, the exact opposite occurs. The allowance for installation of uncharged sub-systems maintains and enhances reliance on HCFC-22 based systems.

EPA summed up the limited purpose of the exemption for uncharged component parts in the preamble to the final rule by stating that “the Agency’s desire is to allow the servicing of existing appliances that have not reached their intended end-of-life.” *Id.* at 66,460. EPA repeated this purpose in posting advice to consumers providing that the service of existing HCFC-22 appliances was limited to preserving the “useful life” of current systems.⁶ EPA has also found that residential air conditioning systems typically have “lifetimes of 15 years *or shorter*.” See *Projected Servicing Needs in the U.S. Air Conditioning and Refrigeration Sector*, at 39 (Dec. 2009) (the “Servicing Tail Report”). Other estimates have placed “useful life” at 18 years.⁷ The final Appliance Rule, however, matches neither the physical limits of existing systems, EPA’s estimate and other reasonable estimates of the normal timeframe for replacing appliances, nor EPA’s broader policy goals.

This is due to the basic facts concerning the construction and operation of HCFC-22 air conditioning systems. Because of the critical role that residential condensing units play in a

⁶ Consumer FAQs, http://www.epa.gov/ozone/title6/phaseout/ac_repair_replacing.html (last visited Dec. 1, 2010).

⁷ Enclosed information attached to Air-Conditioning, Heating and Refrigeration Institute Letter to Hon. Gina McCarthy, EPA, September 24, 2010.

split-system air conditioner, allowing unmitigated replacement of these units in their entirety effectively *extends* the useful life of existing residential HCFC-22 systems, potentially by as much as 100%. Thus, like the famous 1940s and 1950s United States automobiles that prowl the streets of Havana using completely rebuilt or replaced engines, residential HCFC-22 equipment could be in service well past the time it would otherwise be retired or replaced, with condensing units being analogous to a car's engine.

The net result of perpetuating residential HCFC-22 use is to create market incentives that are contrary to EPA's stated goals of reducing the use of ozone-depleting substances and facilitating the transition to less harmful substances. As a result of the "exemption" for uncharged parts and systems in the Appliance Rule, earlier this year many manufacturers such as Nordyne, Rheem, and Goodman started to aggressively market uncharged HCFC-22 components not as repair parts but as cheaper alternatives to the purchase of new 410A systems. *See* Attachment A. Carrier also recently reentered the HCFC-22 replacement component market in an effort to remain competitive in the marketplace. *See* Attachment B. EPA could not have intended this result when it promulgated the Appliance Rule, a rule designed to reduce not promote HCFC-22 usage.

The Appliance Rule as currently structured has undermined the efforts of Carrier and other companies that had exited the residential HCFC-22 market in anticipation of the rule and EPA's further step-downs under the Montreal Protocol. As EPA is aware, Carrier has made substantial investments in the development of the next generation systems, particularly 410A systems.⁸ Some of Carrier's innovation efforts were starting to pay off; since 1996, Carrier has

⁸ Carrier has received several awards from EPA recognizing its leadership in the phase-out of ozone-depleting substances. *See, e.g.*, EPA's 2007 Best-of-the-Best Stratospheric Ozone Protection Award Winners (2007),

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sold more than three million 410A systems. Further transitional efforts, however, are likely to be stifled by the ability of manufacturers to market the replacement of certain sub-systems (*e.g.*, condensing units), and the resulting life extension of an existing HCFC-22 system, as a cheaper alternative to the purchase of a new, energy efficient 410A system. The outcome of this policy will be to delay the transition away from HCFC-22 and the human health and environmental benefits that will result from that transition.

**EPA'S APPLIANCE RULE, AS CURRENTLY PROMULGATED,
IS NOT IN THE BEST INTEREST OF THE ENVIRONMENT OR CONSUMERS**

EPA's current prohibition, which exempts uncharged components — including entire sub-systems such as condensing units — allows manufacturers to market HCFC-22 condensing units not just as repair parts but as viable alternatives to the purchase of new 410A systems. EPA's intent in the Appliance Rule was to allow for the servicing of existing units; it was not to raise base demand for HCFC-22, or to increase potential for stratospheric ozone harm or other harms to the environment through the generation of greenhouse gas emissions. Neither was EPA's intent to perpetuate consumer dependence on a fading technology or hinder the transition from HCFC-22 to acceptable substitutes with lesser environmental impact. EPA should therefore amend its Appliance Rule to eliminate these perverse outcomes.

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available at: http://www.epa.gov/ozone/awards/bestofthebest/2007_both_winners.html (last visited Dec. 12, 2010) ("For Innovation in the Phase-out of Ozone-Depleting Refrigerants. Carrier Corporation and its subsidiaries have led the global phase-out of ozone-depleting substances (ODSs) for the air conditioning and refrigeration industry, both in the development of new technology and the introduction of new products for the international marketplace. In 1994, Carrier was among the first manufacturers of stationary air conditioning to phase out chlorofluorocarbons ("CFCs) on a worldwide basis, two years ahead of developed country requirements and 16 years ahead of developing country requirements. Carrier was also first (in 1996) to introduce equipment with non-ozone-depleting refrigerants to replace hydrochlorofluorocarbon-22 (HCFC-22) systems for commercial and residential applications, decades ahead of U.S. domestic and Montreal Protocol mandates."). Carrier also received Stratospheric Ozone Protection Awards in 1994 ("For Corporate Leadership in Product Development and Technology to Phase-out Ozone Depleting Substances") and 1996 ("For Corporate Leadership in the Development of HCFC Substitutes").

A. By Allowing Unfettered Replacement of Sub-Systems, EPA's Appliance Rule Perpetuates and Increases Demand for HCFC-22

Under the Appliance Rule's exemption for uncharged component parts, industry experts predict that demand for HCFC-22 replacement components will undercut EPA's anticipated reduction of HCFC-22 usage over the next several years. Based on information supplied by the Air-Conditioning, Heating, and Refrigeration Institute ("AHRI"), residential condensing units used to service existing systems account for four out of every five split-system air conditioners and heat pump shipments. *See* AHRI Letter to Hon. Gina McCarthy, EPA, dated September 24, 2010 ("AHRI September 24 Letter").

Based on industry knowledge, Carrier anticipates that 80% of those replacement units are configured to use HCFC-22 refrigerant. This 80% scenario was provided by AHRI to EPA in September 2010. *See* AHRI September 24 Letter (Scenario 8). Under an 80% replacement scenario, approximately 17 million residential HCFC-22 systems will receive new condensing units before the end of the initial HCFC-22 step-down in 2015. *Id.* By 2015, this replacement volume would constitute approximately 29% of EPA's HCFC-22 allocation. *Id.* This promotes the continued use of HCFC-22, not the transition away to more ozone-friendly alternatives.

B. EPA's Appliance Rule Will Result in Greater Emissions of HCFC-22, a Substance with High Ozone Depletion and Global Warming Potential

The downside of maintaining an aging air conditioning system beyond its useful life is two-fold. First, environmental damage can occur from the leakage of HCFC-22 into the atmosphere during servicing and during the normal operation of the unit over time.⁹ When the use of a system is extended beyond normal lifetimes of 15 or 18 years, so is the aggregate amount of HCFC-22 emitted to the atmosphere. Second, there are associated losses in energy

⁹ *Id.*

efficiency when replacement of older technology equipment with more efficient new technology is delayed. Efficiency losses also occur when new higher-grade residential condensing units are matched with lower-efficiency indoor coils, which is the case when a consumer replaces the condensing unit on a system that was installed many years earlier. Since EPA's rule specifically forbids simultaneous installation of both indoor and outdoor components that collectively would constitute a newly manufactured appliance, the Appliance Rule itself has the perverse outcome of preventing a system from reaching its optimal SEER rating. Taken together, the loss in energy efficiency costs the consumer and results in an increase in GHG emissions because additional electric generation is required to provide power to lower-SEER systems. *See* AHRI September 24 Letter, calculation of "Cumulative Emission Increase (MT CO₂E)" in all scenarios modeled.

1. Greater Emissions of Ozone Depleting Substances

For every year that an HCFC-22 system operates, additional losses of HCFC-22 can be expected. As cited above, EPA estimates that this "loss rate" for residential HCFC-22 air conditioning systems is approximately 12% per year, consisting of both "normal" leakage and the losses that occur during the servicing of the equipment. *See* Servicing Tail Report at 30-32. Thus, allowing the replacement of sub-systems, which in turn extends the useful life of the HCFC-22 system as a whole, will result in more emissions to the atmosphere. If these systems were instead retired at the end of their useful lives, the HCFC-22 would be captured and then reused or destroyed. Replacing major parts or sub-systems will also not address refrigerant leaks occurring throughout the rest of the installed system.

In broad scale, these dynamics have been recognized in technical assessments presented to the Parties to the Montreal Protocol. In evaluating different scenarios prior to the adoption of

Decision XIX/6, the Technology and Economic Assessment Panel noted that, “[t]he most advanced accelerated HCFC phase-out schedule combined with all other practical measures provides cumulate ozone-related savings of nearly 1.25 million ODP tonnes.” United Nations Environmental Programme, Technology and Economic Assessment Panel, *Response to Decision XVIII/12*, August 2007 (“TEAP Report”) at 10. All scenarios analyzed projected ODP decreases associated with retirement of equipment. And the TEAP noted that “[e]arly retirement of equipment can provide an additional 130,000 ODP tonnes.” *Id.* at 12. While the scenarios analyzed by the TEAP are not identical to the planned phase-out of HCFC-22 in the United States, and Carrier is not advocating “early retirement” of equipment, this technical information indicates that more aggressive phase-outs involving the transition from HCFC-22 equipment to other alternatives can yield substantial benefits for the ozone layer. Such benefits will not be realized if equipment is allowed to be kept in service years after it would normally be retired.

The only plausible way to conclude that extending the useful life of the existing fleet of residential HCFC-22 systems will *not* result in more overall atmospheric emissions (and hence harms) is to assume that *all* HCFC-22 currently in inventory as well as the volume that will be newly produced during the current allocation period will eventually be released into the atmosphere regardless of EPA’s transition policies. But this assumption is wrong. Not all HCFC-22 in the inventory will eventually be released. Indeed, both the CAA and EPA’s regulations expressly prohibit such venting. CAA § 608(c); 40 C.F.R. § 82.154. Specifically, CAA § 608(c) renders it “unlawful for any person, in the course of maintaining, servicing, repairing, or disposing of an appliance . . . to knowingly vent or . . . release or dispose of any class I or class II substance . . . in a manner which permits such substance to enter the environment.” Section 82.156 similarly provides that persons disposing of appliances, except for

small appliances, must evacuate the refrigerant to a certified recovery or recycling machine. In implementing CAA section 608, EPA has also promulgated numerous regulations specifying required practices, standards for recycling and recovery equipment, approved equipment testing organizations, technician certification, reclaimer certification, and reporting and recordkeeping requirements. *See* 40 C.F.R. §§ 82.156-166. EPA also has closely studied destruction technologies for ozone-depleting substances as well as regulatory requirements related to their destruction.¹⁰ *Id.* § 82.104(h)(2). Thus, to assume that all HCFC-22 will eventually be released into the atmosphere regardless of how EPA transitions away from HCFC-22 systems is to ignore the multilayered web of regulations that prohibit such releases.

2. *Increased Emissions of Greenhouse Gases*

EPA has long recognized that substantial reductions in GHGs can be achieved through increasing energy efficiency. In 1992, EPA and Department of Energy established ENERGY STAR as a voluntary labeling program designed to identify and promote energy-efficient products to reduce GHGs.¹¹ In 2004, EPA established the SmartWay program to address GHGs, fuel consumption, and criteria air pollution in the freight transportation sector. More recently, EPA has advocated energy efficiency as an approach to addressing GHGs in the permitting of new and modified facilities.¹²

In addition to reduced leakage rates from continued usage and servicing, newer air conditioning technology is more energy efficient, resulting in upstream decreases in the emission

¹⁰ *See* Destruction of Ozone-Depleting Substances in the United States, Prepared by ICF International for U.S. EPA's Stratospheric Ozone Protection Division (July 2008).

¹¹ http://www.energystar.gov/index.cfm?c=about.ab_history

¹² *See* PSD and Title V Permitting Guidance for Greenhouse Gases, United States Environmental Protection Agency, Office of Air Quality Planning and Standards, November 2010.

of GHGs associated with the generation of electricity. AHRI has estimated substantial cumulative emission increases of carbon dioxide (CO₂) emissions if uncharged HCFC-22 air conditioning condensing units are allowed to be placed into service and charged. Projected cumulative CO₂ increases range from 1,291,616 to 12,916,163 MT CO₂ in 2015 depending on the scenario analyzed. *See* AHRI September 24 letter. And, as noted in the TEAP Report, “it is clear that *the single biggest contributor to cumulative emissions savings both in terms of ozone and climate is an accelerated HCFC phaseout . . .* [T]o gain maximum climate benefit from such a transition, further efforts are needed to promote the development and deployment of alternatives delivering lower climate impact, particularly in complex sectors such as commercial refrigeration.” TEAP Report at 13 (emphasis added).

Allowing the sale and distribution of residential appliance sub-systems (*e.g.*, residential condensing units) manufactured after 2010 will result in the loss of energy efficiency gains and the concomitant GHG reductions.¹³ The existing rule artificially maintains the viability of HCFC-22 units by allowing residential sub-system replacements and thereby discourages the transition to more efficient systems that rely on alternative refrigerants. As discussed above, a “rebuilt” HCFC-22 system (*i.e.*, one with a new HCFC-22 condensing unit) will not be as energy-efficient as a newly manufactured 410A system since the outdoor condensing unit will not be properly matched with the appropriate indoor coil. Indeed, EPA’s existing Appliance Rule guarantees this result since it prohibits the sale of complete systems, pre-charged or “dry.”

¹³ For example, the Department of Energy has calculated that CO₂ emissions range from 2.08 to 2.18 lbs per kilowatt-hour for coal-fired power plants. http://tonto.eia.doe.gov/ask/environment_faqs.asp#CO2_quantity

C. Incentives for New Technology will be Decreased and Consumers May Pay a Higher Price for Continued Reliance on HCFC-22

Carrier recognizes and supports the ability of consumers to realize a return on their investment and to service their air conditioning systems throughout their useful lives. This petition, if granted, would not affect their ability to do so. Consumers could still make routine repairs to their systems, and systems would still be covered under warranty. Carrier, like other manufacturers, warrants not only its systems, but also the individual component parts of the system. Thus, if an air conditioning system fails during the warranty period, Carrier will fix the system by replacing the appropriate component part. Again, Carrier's proposed amendment to the Appliance Rule would not change this fact. Individual parts could be replaced or repaired. Thus, if a fan or compressor on a condensing unit fails, that part would be repaired. What would be prohibited is the sale, marketing, and distribution of full residential sub-systems. Thus, a consumer could not repair a faulty fan by replacing the entire condensing unit.

In addition to the above discussed environmental harms, an artificial extension of the useful life of residential HCFC-22 systems will place an ever-increasing burden on consumers who will be forced to pay for future HCFC-22 servicing where indiscriminate replacements occur. This is most likely to occur when entire residential sub-systems — such as residential condensing units — are used to arbitrarily extend operations of an existing system.

Residential condensing units account for approximately 80% of the total cost of a complete residential air conditioning system. This is because condensing units — which include the compressor, fan, condenser coils, and exhaust fan — are the heart of a split-system air conditioning unit. Thus, by replacing a residential condensing unit, a consumer will substantially extend the useful life the whole system — thereby perpetuating their dependence on HCFC-22. And as EPA steps down in 2015 and again in 2020, the price of HCFC-22 will continue to

increase, placing additional economic burdens on the consumer. In fact, in its preamble to the Appliance Rule, EPA specifically noted that “[t]he more aggressive phasedown of HCFC-22 production and import ... is likely to lead to an increase in the price of HCFC-22 and a drop in the price of R-410A. *Prices of HCFC-22 will likely increase as the stepwise reductions in production and consumption continue.*” 74 Fed. Reg. 66,463-64 (emphasis added).

Carrier emphasizes that its proposed amendment is not intended to tilt the market toward one manufacturer or another. Carrier manufactures both HCFC-22 sub-systems and the next generation 410A systems. Like other manufacturers, Carrier will respond to the marketplace that is shaped by EPA’s regulations. But Carrier believes that the better environmental policy is for EPA to promote the transition to more ozone friendly technologies, or at the very least to eliminate incentives to the continuation of residential HCFC-22 systems into the next decade and beyond. Treating precharged appliances, precharged appliance components, and appliance subsystems in the same manner is justified both on the basis of their similar effect on the environment and in order to provide proper incentives for the transition to more efficient technology.

PROPOSED AMENDMENT

Carrier proposes that EPA initiate a rulemaking to modify the Appliance Rule to eliminate the loophole created by not prohibiting the sale and distribution of residential HCFC-22 sub-systems. As discussed above, this loophole could be closed easily by amending subpart I as follows: (1) adding to the list of prohibited products set forth at § 82.306 “appliance sub-systems manufactured on or after January 1, 2012”; and (2) adding to § 82.302 the following definition of “residential appliance sub-systems”: “any portion of the residential refrigerant

circuitry consisting of the following component parts: a compressor, motor, fan, and condenser or heat exchanger coil for systems with capacities of less than 65,000 Btu/hour.”

If adopted, these changes would serve the dual purpose of allowing consumers to service their existing systems without creating a disincentive to the transition away from HCFC-22 systems. EPA would thus confine the “servicing” of existing systems to actual component *parts*, such as fans, motors, coils, and compressors, not to the replacement of residential unit sub-systems.

Adoption of this definition and the associated prohibition would benefit stratospheric ozone (and hence human health and the environment) by reducing overall emissions of HCFC-22 and accelerating the transition away from HCFC-22 systems. Importantly, despite the environmental benefit, this option would not impose a material burden on consumers. Although the actual price differential between a new HCFC-22 condensing unit and a new air conditioning system can vary between specifications, the differential is in the hundreds of dollars range. (*See, e.g.,* Wilmar advertisement attached as Exhibit A.) And, as noted previously, many replacement parts are covered by warranty, further reducing the potential economic impact on the consumer. Thus, EPA has the opportunity to protect both consumers and the environment by adopting an approach that treats appliance sub-systems identically to precharged appliance and components.

CONCLUSION

For the foregoing reasons, Carrier respectfully requests the EPA initiate a new rulemaking or act to reconsider the Appliance Rule to prohibit the sale and distribution of residential HCFC-22 sub-systems manufactured after January 1, 2012.

Attachment A

September 29, 2010

David Goodman
Capital Management

Hello David,

I am pleased to announce we now have confirmation that there is now an available and effective alternative to the converting of R22 refrigerant based split air conditioning systems to the new R410A refrigerant.

As many of you have discovered, the increased price in R410 equipment, refrigerant and associated tools required to work on R410A air conditioning systems will negatively affect property and overall portfolio budgets.

We had word earlier this summer that there was an option to hit the market in the way of a "Dry" R22 unit. One that would not have R22 Refrigerant in the unit upon shipment, but would be filled at the time of installation. This "Dry" unit would meet the requirements set by the EPA regarding the phase out of R22 based refrigerant equipment.

I was hesitant to send out this information prior to now since when we first heard about this option there was no concrete commitment in the market to produce a viable alternative product to the R22 units we have been used to using. It turns out that once announced, the regulatory, and political and market pressures on The DuroGuard Company became so great that they decided to cancel all orders for this equipment. When I saw a note stating that all R22 units from DuroGuard that were going to HD Supply as well as other distributors were canceled, I was glad I had not sent out a pre-release information note.

After reviewing the manufacturer's commitment, I am confident that HD Supply is now able to provide your company the DuroGuard Dry R22 systems at a price level that will be positioned very price competitively.

Listed below are the part numbers, tonnage and pricing we have available. Orders can be placed now for delivery starting first week of October. Since this is a re-start in manufacturing for DuroGuard, there will be a bit of ramp up time to get to full production capabilities so there may be a short delay on some sizes.

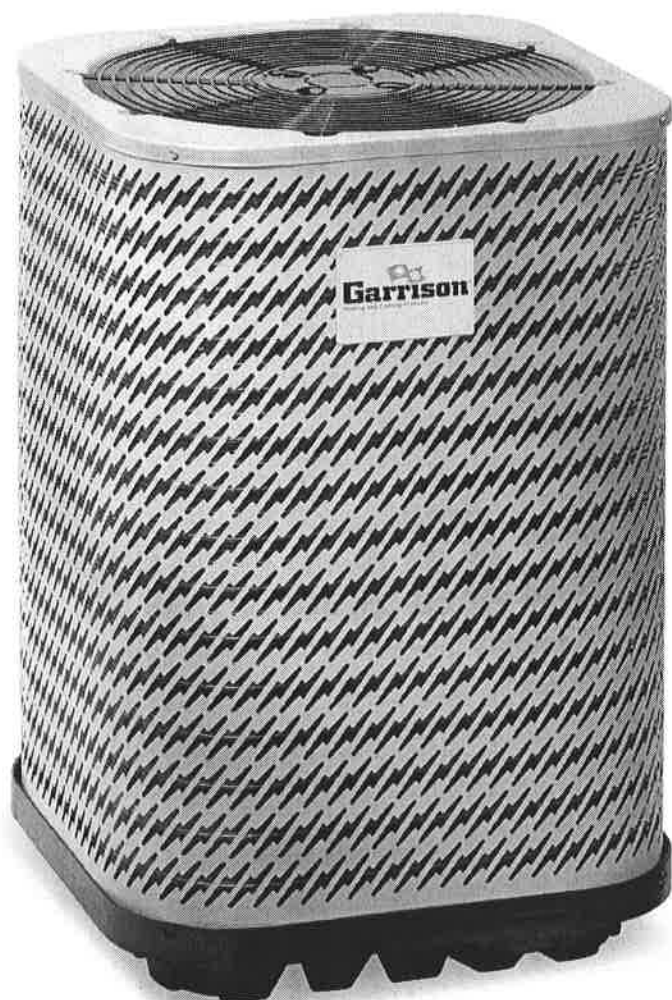
While I understand our competitors have also been provided access to this product line I would ask that you please check our pricing and availability prior to making your purchasing decisions.

Wilmar®

Buy Smarter.

R-22


Equipment



Place Your Order Today!

Item No.	13- Seer R-22 Air Conditioners	Price
53-5300	1.5 Ton	Call for Price!
53-5301	2.0 Ton	
53-5302	2.5 Ton	
53-5303	3.0 Ton	

- Full 5-Year Warranty
- Copeland scroll compressor
- Save more than \$400 vs R-410A installation
- No need to purchase \$1,700 worth of R-410A installation tools



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R-22

Installation Costs Comparison


Installation Costs for a 2 Ton Garrison A/C Unit

Item No.	Description	R-410A	R-22
53-5561	2.0 Ton Cased Evaporator Coils, 17.5", U/D/H, R-410A	\$209.00	
53-5131/53-5301	2.0 Ton Air Conditioner		Comparable
53-2116	Pro-Flush Kit	\$138.78	
53-6107	Liquid Line Drier, 3/8" SWT		\$10.12
	Additional Labor: 4 hours @ \$18/hour	\$72.00	
Total:		\$419.78	\$10.12



New Installation Tools needed for R-410A A/C Units

Item No.	Description	Price
53-5933	JB Industries Charging Manifold with 5-Ft. Hoses	\$76.10
55-9972	Ritchie RecoverXLT Recovery Machine with Sensor	\$949.00
54-3123	30-lb. Recovery Tank with Overfill Sensor	\$159.99
53-0144	Electronic Vacuum Gauge	\$126.63
53-6473	Ritchie 4.0 CFM 2-Stage Vacuum Pump	\$463.00
Total Additional Costs:		\$1,774.72



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FAQ

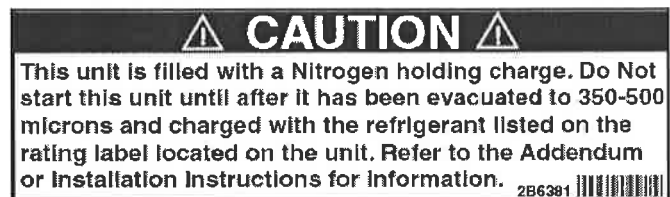
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What is the difference between these units and previous R-22 equipment?

The only difference is that these units are filled with a nitrogen holding charge. Previously, the equipment was charged with R-22 refrigerant.

How can the installer identify that the unit is charged with nitrogen?

There are labels attached to each unit indicating it is charged with nitrogen. The label to the right will be included with each unit.



What is the additional installation time compared to a charged R-22 unit?

It takes less than one minute to purge the nitrogen from the system. As always, the installer needs to evacuate the system to 300 - 500 microns.

How do I charge this unit?

The installer must purge the nitrogen charge from the unit and evacuate the system to 300 - 500 microns before charging to factory specifications with R-22 refrigerant.

What are the operating pressures?

There are no changes in operating pressures from a standard R-22 system.

What is the warranty?

The warranty is 5 years on all parts and compressor.

What compressors are installed?

These units use Copeland Scroll compressors for premium performance and quiet operation.

Are there any restrictions on installing R-22 units?

No, as long as they are used for the replacement of existing AC equipment. They are not to be used for new construction installation.

How long will R-22 refrigerant be available?

Since 1994, only EPA Section 608 certified technicians have been able to purchase R-22. Restrictions on the amount of available R-22 started in 2010 and the production and import of R-22 will cease in 2020. However, it is expected that reclaimed and recycled R-22 will still be available after 2020 to service and maintain HVAC equipment.

Has R-22 refrigerant been banned and will I be required to stop using it in my air conditioning equipment?

No, the use of R-22 refrigerant has not been banned, and there will be a long phase-out period for R-22 which will provide ample time to convert to a new refrigerant when you would normally need to replace your HVAC equipment.



**PRODUCT
MARKETING
NEWS**



C-PC-SP-371

Date: October 14, 2010

To: Goodman® Brand Distribution, Amana® Brand Distribution, Goodman Manufacturing Company, L.P. Sales, Logistics and Marketing Personnel

From: Gary Clark, Senior Vice President of Marketing

Subject: Production of "Uncharged" R-22 Split Systems

On December 15, 2009, the Environmental Protection Agency (EPA) issued the following:

**40 CFR Part 82
Protection of Stratospheric Ozone: Ban
on the Sale or Distribution of Pre-
Charged Appliances; Final Rule**

This document is attached for your reference.

As you may know, the EPA's Pre-Charged Appliances rule applies to appliances charged with HCFC-22. As the Agency made clear in the Pre-Charged Appliances rule at page 66459: "EPA is not banning the sale and distribution of un-charged or previously manufactured components needed to service existing appliances manufactured prior to January 1, 2010." Furthermore, EPA states in the Pre-Charged Appliances rule at page 66460:

"This prohibition does not apply to appliance components manufactured on or after January 1, 2010, that are sold, distributed, or otherwise introduced into interstate commerce uncharged or with a holding charge of an inert gas, such as nitrogen. Such uncharged components could be used as replacement components for pre-2010 appliances in need of service and charged with either virgin or reclaimed HCFC-22 or HCFC-142b." (Emphasis added.)

Goodman's approach to the new EPA rules can only be characterized as very judicious. After the final rules were published in the Federal Register and then analyzed, Goodman directly communicated with various EPA officials regarding our reading of the rules. Additionally, on March 9, 2010, I and other Goodman representatives visited with EPA staff at its building at 13 10 L Street, NW, in Washington, regarding the sale and distribution of uncharged components manufactured after December 31, 2010, to

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be used as replacement parts in existing units. EPA informed us that the Agency purposefully chose to allow the sale and distribution of uncharged components.

More recently, representatives of several industry stakeholders (including myself) met with EPA's Assistant Administrator, Regina A. McCarthy, on September 7, 2010, on the issue of the sale and distribution of uncharged components, and EPA informed stakeholders that it had no current plan to change or alter the current rule.

Goodman also has been in close contact with representatives of the Department of Energy ("DoE") regarding its obligations to comply with DoE's regulations requiring the submission of data on energy efficiency. As you know, the Air-Conditioning, Heating and Refrigeration Institute (AHRI) has submitted such data to DoE on behalf of many AHRI members. However, DoE also allows manufacturers to submit certification reports and compliance statements directly with the Department, and DoE representatives have walked Goodman representatives through this process to ensure that any new production of "uncharged" R-22 products meet the federally-mandated minimum-efficiency requirements that DoE regulates.

Goodman also recognizes that "uncharged" R-22 products must be properly marked with an Energy Guide label.

After completing this rigorous process, Goodman has decided to begin production of split system air conditioners and heat pumps that will be designed to utilize a field-supplied refrigerant charge of R-22. These products will be shipped from the factory containing a charge of nitrogen and helium that will need to be evacuated from the units before installation. Consistent with the EPA rules, these units should only be installed as replacement components for pre-2010 installed appliances in need of service.

Goodman is currently planning to produce the following Goodman® branded products:

Air Conditioners	Heat Pumps
GSC130181	GSH130181
GSC130241	GSH130241
GSC130301	GSH130301
GSC130361	GSH130361
GSC130363	GSH130363
GSC130421	GSH130421
GSC130481	GSH130481
GSC130483	GSH130483
GSC130601	GSH130601
GSC130603	GSH130603
GSC100903	GSH100903
GSC101203	GSH101203

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Production will begin in mid-November, and limited supplies of products will be available through January as we increase our ability to produce greater quantities of “uncharged” R-22 units.

Goodman intends to make these “uncharged” R-22 units available on an ongoing basis for as long as the current regulations remain in effect. Please remember that these units may only be used as replacement components for pre-2010 installed systems.

Information for the specific product launch schedule, pricing, specifications, and revised installation procedures will be made available shortly. Units will be available on a first-come first-serve basis under your open account cash terms.

I hope the details contained in this letter regarding Goodman’s approach to the new EPA rules, as well as its efforts to ensure compliance with DoE and FTC regulations, provide you with the information you need. If you need additional information, please do not hesitate to contact me or your Regional Sales Director.

Attachment

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HD Supply – DuroGuard – R22 Dry Units

259377 – 1.5t - \$564

259379 – 2.0t - \$624

259381 – 2.5t - \$678

259383 – 3.0t - \$764

259385 – 4.0t - \$979

259387 – 5.0t - \$1,194

Our equipment will be capable of operating with reclaimed r22, r22 replacements, or even the real deal (r22 from the green jug.

Please do not hesitate to contact me if you have questions concerning the specifications or capabilities of this product line.

Thank You,

Harvey Buller

Attachment B



Payne Product Bulletin

Subject: R-22 Replacement AC and HP
Department: RES Marketing
Date: 10/22/2010
Contact: *Stephen McCoy*
HP Systems 317-381-7084
Jeff Goss
AC Systems 317-260-2346
Rob Lambert
Apps & 2-Stage 317-240-5188
Jeff Warther
Split Systems Manager 317-240-5282

Last Order Date:	TBD
Model Numbers:	TBD
Bulletin Number:	PA-103-10-15

New Replacement "R-22" Units

Payne is proud to offer a broad lineup of split systems charged with HFC-410A refrigerant to support the needs of its customers. Our long standing corporate commitment to environmentally sound refrigerants has allowed us to establish an industry leading position in R-410A installations in North America. We constantly strive to provide the most innovative and reliable cooling solutions to our customer base.

Payne supports, and will continue to advocate, the industry position adopted by the Air-conditioning, Heating & Refrigeration Institute (AHRI) that urges the Environmental Protection Agency (EPA) to follow the understood intent of the Clean Air Act to phase-out all new charged or uncharged residential HCFC-22 (R-22) condensing units for domestic applications. We have been working directly with both the EPA and the Department of Energy (DOE) to analyze the impact of the EPA's final rule on the phase-out of R-22 appliances. While the planned phase-out was well understood and anticipated by the entire industry for more than a decade, the EPA's final rule on the subject unexpectedly permitted the manufacture and sale of condensing units for the repair of existing R-22 installations, as long as these condensing units are field-charged with R-22.

We have been in discussions with EPA and have urged them to reconsider the consequences of their R-22 decision. On Friday the Department of Energy (DOE) issued "guidance" on the issue of certification of dry R-22 condensing units. This guidance addressed how dry R-22 condensing units can be certified to federal minimum efficiency requirements and comply with the Federal Trade Commission's Appliance Labeling Rule (the yellow hang tag).

Given these facts and our commitment to providing you with a competitive product line, Payne has decided to begin production of dry R-22 condensing units (cooling-only and heat pumps). As prescribed by the EPA final rule, these units may only be used as a repair component for existing applications and will require a field charge of R-22 refrigerant.

We have moved carefully in the recent months to ensure that any decision we made regarding the production and sale of dry R-22 condensing units would be in compliance with federal law. We have communicated repeatedly with all of the agencies involved to fully understand the current state of all applicable regulations. It is important to note that fines for violating these regulations can extend from manufacturers through distributors to retailers. These dry units are only for the repair of existing installations.

Beginning November 1 we will accept orders for the following Payne products:

AC PA13*R dense grille only, single and three phase

HP PH13*R dense grille only, single and three phase

Production is scheduled to begin before the end of the year. Details regarding specific product launch schedule, terms of sale, pricing, warranty, and technical data will be distributed by October 29, 2010. Payne's intent is to produce and sell these units for as long as there is demand in the field and provided they remain in compliance with applicable federal regulations. It is possible that EPA will follow the industry recommendation to phase-out dry R-22 units at some point in the future.

Payne remains committed to ensuring compliance with DOE, EPA and FTC laws and regulations. Should any of these organizations provide a clarification or change that would affect the sale or installation of dry R-22 condensing units, we will inform you immediately.

Thank you for your continued support!

Chris Nelson
VP, Sales and Marketing - RLCS